

**Montana Board of Oil and Gas Conservation  
Environmental Assessment**

**Operator:** XTO Energy, Inc.  
**Well Name/Number:** Hanson 44X-26B  
**Location:** SE SE Section 26 T23N R59E  
**County:** Richland, MT; Field (or Wildcat) Wildcat

**Air Quality**

(possible concerns)

Long drilling time: No, 30-35 days drilling time.

Unusually deep drilling (high horsepower rig): A triple derrick rig to drill a single lateral Bakken Formation Horizontal Lateral, 20,197' MD/10,137' TVD.

Possible H<sub>2</sub>S gas production: Slight chance of H<sub>2</sub>S gas production.

In/near Class I air quality area: No, not in a Class I air quality area.

Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under rule 75-2-211.

Mitigation:

☒ Air quality permit (AQB review)

☒ Gas plants/pipelines available for sour gas

☐ Special equipment/procedures requirements

☐ Other: \_\_\_\_\_

Comments: If there are existing pipeline for H<sub>2</sub>S gas in the area then gas must be tied into system or if no gathering system nearby H<sub>2</sub>S gas can be flared under Board Rule 36.22.1220.

**Water Quality**

(possible concerns)

Salt/oil based mud: Yes to intermediate casing string hole will be drilled with oil based invert drilling fluids. Horizontal lateral will be drilled with produced brine water. Surface casing hole will be drilled with freshwater and freshwater drilling fluids.

High water table: Yes high water table anticipated. Appears to be in a flood irrigated field.

Surface drainage leads to live water: Yes, closest drainage is the Yellowstone River, about ½ of a mile to the east from this location.

Water well contamination: None, surface hole will be drilled with freshwater and freshwater drilling fluids to 1520', steel surface casing will be run and cemented to surface from 1520' to protect any ground and surface waters. Closest water wells are about 1/8 of a mile to the west, about ½ of a mile to the east northeast, about 5/8 of a mile to the northeast, about ¾ of a mile to the northeast, about 7/8 of a mile to the west, , about ¾ of a mile to the southwest and about 7/8 of a mile to the southwest from this location. Depth of these stock and domestic water well range from 13' to 1200'. Surface casing hole will be drilled with freshwater and a freshwater drilling fluids. Surface casing will be set well below the depth of these water wells to 1520' and cement to surface. No concerns.

Porous/permeable soils: Yes, sandy silty clay soils at the wellsite.

Class I stream drainage: Yes, Class I stream drainage, Yellowstone River.

Mitigation:

☐ Lined reserve pit

☒ Adequate surface casing

- ☐ Berms/dykes, re-routed drainage
- ☒ Closed mud system
- ☒ Off-site disposal of liquids (in approved facility)
- ☐ Other: \_\_\_\_\_

Comments: 1520' of surface casing is enough surface casing to cover Base Fox Hills Formation. Surface hole will be drilled with freshwater and freshwater drilling fluids to 1520'. Steel surface casing will be run to 1520' and cemented to surface. Oil based invert drilling fluids will be recycled. Drill cuttings will be disposed offsite. After the well has been completed, completions fluids will go to a commercial Class II disposal.

### Soils/Vegetation/Land Use

(possible concerns)

Stream crossings: None, anticipated.

High erosion potential: No, high erosion potential, small cut, 1.6' and small fill, up to 0.3', required.

Loss of soil productivity: None, location to be restored after drilling well, if well is nonproductive. If productive unused portion of drillsite will be reclaimed.

Unusually large wellsite: Yes, well site is very large, 550'X350'.

Damage to improvements: Private irrigated crop lands.

Conflict with existing land use/values: Slight.

Mitigation

- ☐ Avoid improvements (topographic tolerance)
- ☐ Exception location requested
- ☒ Stockpile topsoil
- ☐ Stream Crossing Permit (other agency review)
- ☒ Reclaim unused part of wellsite if productive
- ☐ Special construction methods to enhance reclamation
- ☒ Other: Requires DEQ General Permit for Storm Water Discharge Associated with Construction Activity, under ARM 17.30.1102(28).

Comments: Access will be over existing county road, #125. A short access road will be constructed into this location, about 721'. Oil based drilling fluids will be recycled. Completion fluids will be hauled to a Class II commercial disposal. Drill cuttings will be disposed of offsite at an approved disposal site. No concerns.

### Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: Closest residences are about ¾ of a mile to the northwest, ¾ of a mile to the west, 1 mile to the southwest and 1.25 miles to the northeast from this location. The town of Sidney, Montana is about 2 miles to the west southwest from this location.

Possibility of H2S: Slight chance of H2S.

Size of rig/length of drilling time: Triple derrick drilling rig, 30 to 35 days drilling time.

Mitigation:

- ☒ Proper BOP equipment
- ☐ Topographic sound barriers

- ☐ H2S contingency and/or evacuation plan
- ☐ Special equipment/procedures requirements
- ☐ Other: \_\_\_\_\_

Comments: Adequate surface casing cemented to surface with working BOP stack should mitigate any problems.

### **Wildlife/recreation**

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified): None identified.

Proximity to recreation sites: None identified.

Creation of new access to wildlife habitat: No

Conflict with game range/refuge management: No, no game range/refuge in the area.

Threatened or endangered Species: Threatened or endangered species identified by USFWS in Richland County are the Pallid Sturgeon, Piping Plover, Interior Lease Tern and Whooping Crane. Candidate species are the Sprague's Pipit and the Greater Sage Grouse. NH tracker website lists five (5) species of concern in this Township and Range: Townsend's Big-eared Bat, Black-tailed Prairie Dog, Hoary Bat, Whooping Crane and Spiny Softshell turtle.

Mitigation:

- ☐ Avoidance (topographic tolerance/exception)
- ☐ Other agency review (DFWP, federal agencies, DSL)
- ☐ Screening/fencing of pits, drillsite
- ☐ Other: \_\_\_\_\_

Comments: Private irrigated crop lands. There maybe species of concern that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to what he would like done, if a species of concern is discovered at this location. The Board of Oil & Gas has no jurisdiction over private surface lands.

### **Historical/Cultural/Paleontological**

(possible concerns)

Proximity to known sites None identified.

Mitigation

- ☐ avoidance (topographic tolerance, location exception)
- ☐ other agency review (SHPO, DSL, federal agencies)
- ☐ Other: \_\_\_\_\_

Comments: Private irrigated crop lands. There maybe possible historical/cultural/paleontological sites that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to his desires to preserve these sites or not, if they are found during construction of the wellsite. The Board of Oil & Gas has no jurisdiction over private surface lands.

### **Social/Economic**

(possible concerns)

- ☐ Substantial effect on tax base
- ☐ Create demand for new governmental services
- ☐ Population increase or relocation

Comments: Horizontal Bakken Formation oil well in a 1280 acre spacing unit. No concerns.

**Remarks or Special Concerns for this site**

A single lateral Bakken Formation horizontal well test drilled to 20,197' MD/10,137' TVD.

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**Summary: Evaluation of Impacts and Cumulative effects**

No long term impacts expected. Some short term impacts will occur.

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I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): /s/ Steven Sasaki

(title:) Chief Field Inspector

Date: February 16, 2012

**Other Persons Contacted:**

Montana Bureau of Mines and Geology, GWIC website

(Name and Agency)

Richland County water wells

(subject discussed)

February 16, 2012

(date)

US Fish and Wildlife, Region 6 website

(Name and Agency)

ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA COUNTIES, Richland County

February 16, 2012

(date)

Montana Natural Heritage Program Website

(Name and Agency)

Heritage State Rank= S1, S2, S3 in T23N R59E

(subject discussed)

February 16, 2012

(date)

If location was inspected before permit approval:

Inspection date: \_\_\_\_\_

Inspector: \_\_\_\_\_

Others present during inspection: \_\_\_\_\_